AMENDMENT TO THE CLAIMS

1. (canceled)

2. (canceled)

3. (canceled)

4. (canceled)

5. (canceled)

6. (canceled)

7. (canceled)

8. (canceled)

9. (canceled)

10. (canceled)

11. (canceled)

12. (Currently Amended) ~~The method of claim 1 wherein receiving the correction input comprises:~~A method of building a learned context free grammar (CFG) for an application, comprising:

    generating a semantic schema for the application, the semantic schema having associated semantic constraints;

    generating a template grammar based on the semantic schema such that the template grammar inherits the semantic constraints associated with the semantic schema; and

    building the learned CFG by parsing training expressions using the template grammar, by:

    obtaining a training expression;

    parsing the training expression to produce a parse result;

    displaying an abstraction of the parse result; and

    receiving a correction input indicative of a direct user correction to the parse result, wherein the correction input annotates at least one anchor point that is a known correct alignment between the training expression and a preterminal in the template grammar, and wherein receiving the correction input comprises:

receiving a selection input selecting an
incorrectly aligned portion of the training
expression in the parse result;

receiving a movement input indicative of a user
dragging the incorrectly aligned portion to a
correct object in the abstraction of the
parse result; and

receiving a placement input indicative of a user
dropping the incorrectly aligned portion on
the correct object in the abstraction of the
parse result.

13. (Original) The method of claim 12 and further comprising:
re-parsing the training expression to produce a new parse
result that complies with the anchor point; and
displaying a new abstraction of the new parse result.

14. (Currently Amended) ~~The method of claim 1 wherein building
the learned CFG comprises:~~ A method of building a learned context
free grammar (CFG) for an application, comprising:
generating a semantic schema for the application, the
semantic schema having associated semantic constraints;
generating a template grammar based on the semantic schema
such that the template grammar inherits the semantic
constraints associated with the semantic schema; and
building the learned CFG by parsing training expressions
using the template grammar, by:
obtaining a training expression;
parsing the training expression to produce a parse
result;
displaying an abstraction of the parse result; and
receiving a correction input, indicative of a direct user
correction to the parse result, and wherein building
the learned CFG further comprises associating at least

one pre-existing library grammar with the template grammar based on a user input.

15. (Original) The method of claim 14 wherein associating at least one pre-existing library grammar with the template grammar comprises:

    selecting one of a plurality of available library grammars; and

    operating the selected library grammar in a generative mode to generate at least one example of an expression supported by the selected library grammar.

16. (Original) The method of claim 14 wherein building the learned CFG comprises:

    simultaneously displaying an indication of the semantic schema and an indication of available library grammars;

    selecting one of the library grammars;

    dragging the selected library grammar to a desired place in the semantic schema;

    dropping the selected library grammar; and

    associating the selected library grammar with the template grammar.

17. (Previously Presented) A method of building a learned context free grammar (CFG) comprising:

    generating a semantic schema for the learned CFG;

    obtaining a template CFG;

    receiving a training expression;

    obtaining an annotated expression by receiving a user annotation input annotating the training expression directly against the semantic schema to provide at least one anchor point that is a known correct alignment between a portion of the training expression and the template CFG;

parsing the annotated expression to provide a parse result
that complies with the anchor point; and
building the learned CFG based on the parse result.

18. (Original) The method of claim 17 wherein obtaining a template CFG includes generating a template CFG based on the semantic schema, and wherein parsing the annotated expression comprises:
parsing the annotated expression with the template CFG.

19. (Original) The method of claim 18 wherein building the learned CFG comprises:
learning alignments of a remainder of the training
expression, other than the portion aligned at the
anchor point, with the template CFG.

20. (Original) A system for developing a domain-specific, context free grammar (CFG), comprising:
a template grammar generator receiving a semantic schema and
generating a template grammar that inherits the
semantic constraints from the semantic schema;
an annotation interface receiving a user annotation input
indicative of a user designated anchor point that is an
alignment of at least a portion of a training
expression with the semantic schema;
a parser, coupled to the template grammar generator and the
annotation interface, receiving the template grammar
and the user annotation input and parsing the training
expression to provide a parse result that complies with
the anchor points; and
a learner, coupled to the parser, learning the domain-
specific CFG based on the parse result.

21. (Original) The system of claim 20 and further comprising:

a grammar manager configured to access a library of pre-
existing grammars, to receive a user association input,
and to associate a selected pre-existing grammar with
the learned CFG based on the user association input.

22. (Original) The system of claim 21 wherein the learner is
configured to operate at least one of the pre-existing grammars
in a generative mode generating examples of expressions supported
by the pre-existing grammar.

23. (Original) The system of claim 20 wherein the learner is
configured to resolve ambiguities in the parse result by
prompting a user for additional alignment inputs, in addition to
the anchor point, to align the training expression with the
template grammar.

24. (Original) The system of claim 20 wherein the learner is
configured to employ predetermined syntactic constraints in
learning the learned CFG to limit portions of the training
expression for which alignments with the template CFG must be
learned.

25. (Original) A method of generating a context free grammar
(CFG), comprising:
    generating an underspecified template CFG;
    annotating a training expression, against an abstraction of
        the template CFG, with one or more anchor points
        aligning portions of the training expression with
        preterminals in the CFG;
    parsing the training expression with the template CFG to
        provide a parse result, given the anchor points;
    learning alignments of the training expression with the
        template CFG, in addition to the anchor points; and

adding CFG rules to the template CFG to reflect the learned alignment and anchor points.

26. (Original) The method of claim 25 and further comprising:
    receiving user correction inputs indicative of a user correction of the parse result.

27. (Original) The method of claim 26 wherein learning alignment comprises:
    accessing pre-existing syntactic constraints; and
    utilizing the pre-existing syntactic constraints to learn the alignments by limiting portions of the training expression for which alignments with the template CFG must be learned.

28. (Original) The method of claim 26 wherein learning alignments comprises:
    using the user correction of the parse result as an anchor point.

29. (Original) The method of claim 25 wherein learning alignments comprises:
    identifying ambiguities in the parse result; and
    prompting user alignment inputs to disambiguate the ambiguities.

30. (Original) The method of claim 25 and further comprising:
    associating pre-existing library CFG rules with the template CFG based on a user association input of the pre-existing library CFG rules with the abstraction of the template CFG.

31. (Original) The method of claim 30 wherein the user association input comprises:

dragging a graphic representation of a pre-existing library
CFG containing the pre-existing library CFG rules from
one portion of a display to another portion of the
display that is a desired place in a graphic
representation of the abstraction of the template CFG;
and

dropping the graphic representation of the pre-existing
library CFG at the desired place.

32. (Previously Presented)   A method of generating a context
free grammar (CFG) for an application in an application domain,
comprising:

generating an underspecified template CFG;

displaying a schema of the application domain instead of the
CFG;

receiving a user input directly annotating a training
expression against the schema instead of the template
CFG, identifying one or more points of alignment
between the training expression and the template CFG;

parsing the training expression with the template CFG to
provide a parse result that complies with the points of
alignment;

learning alignments of the training expression with the CFG;
and

adding CFG rules to the template CFG to reflect the learning
alignments.